

<b>Office Action Summary</b>	<b>Application No.</b> 10/736,944	<b>Applicant(s)</b> CHU ET AL.	
	<b>Examiner</b> Ljiljana (Lil) V. Ciric	<b>Art Unit</b> 3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) none is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20031216</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of the third species or the embodiment of Figure 5A (readable on claims 1 through 20) in the reply filed on April 4, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or the features canceled from the claims, for example: a method step of retaining isolation of the at least one coolant loop upon detection of a drop in coolant pressure in the at least one coolant loop as recited in claims 1 and 17; a method step of isolating each coolant loop of the multiple coolant loops having a leak detected therein as recited in claims 2 and 18; a method step of sending a signal to shutoff power to the associated electronics subsystems of the computing environment when a leaking coolant loop is detected as recited in claim 5; a method step of signaling the indication of a leak when a rate of volume change of coolant within an expansion tank is above a leak rate set point as recited in claim 8; means for retaining isolation of the at least one coolant loop from coolant flow through the cooling system upon detection of a drop in coolant pressure in the at least one coolant loop as recited in claim 9; the means for retaining isolation of each coolant loop of the multiple coolant loops having a leak detected therein as recited in claim 10; means for waiting for a defined interval as recited in claim 11; means for sending a signal to shutoff power to the associated electronics subsystem when a leaking coolant loop is detected as recited in claim 13; and, at least one program storage device readable by a machine and tangibly embodying at least one

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program of instructions executable by the machine as recited in claims 17 through 20. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

3. The disclosure is objected to because of the following informalities: paragraph [0002] should be updated to refer to the co-pending application by using the correct serial number thereof.

Appropriate correction is required.

### *Claim Objections*

4. Claims 1 through 20 are objected to because of the following informalities: “the automatically checking” [claim 1, line 4; claim 3, line 1; claim 6, line 1; claim 7, line 4; claim 9, line 4; claim 17, line 6, claim 19, lines 1-2] should be replaced with “the automatic checking” for improved grammatical correctness and readability. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

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5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 9 through 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. As originally filed, there appears to be no clear explicit or implicit description of the structures or structural equivalents corresponding to the following means-plus-function limitations appearing in claims 9 through 16: means for retaining isolation of the at least one coolant loop from coolant flow through the cooling system upon detection of a drop in coolant pressure in the at least one coolant loop as recited in claim 9 and all claims depending therefrom; means for waiting a defined interval as recited in claim 11 and all claims depending therefrom; and, means for sending a signal to shutoff power to the associated electronics subsystem when a leaking coolant loop is detected as recited in claim 13. With regard to claims 17 through 20, a machine executable program of machine executable instructions is recited, but no exemplary program nor detailed description of one is disclosed by applicants. Thus, it is not clear that the applicants had possession of the claimed invention at the time the application was filed and the claims fail to comply with the written description requirement.

7. Claims 9 through 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The originally filed disclosure lacks even as little as a block diagram of the structures associated with the functions associated with the following means-plus-function limitations appearing in claims 9 through 16: means for retaining isolation of the at least one

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coolant loop from coolant flow through the cooling system upon detection of a drop in coolant pressure in the at least one coolant loop as recited in claim 9 and all claims depending therefrom; means for waiting a defined interval as recited in claims 11 and all claims depending therefrom; and, means for sending a signal to shutoff power to the associated electronics subsystem when a leaking coolant loop is detected as recited in claim 13. With regard to claims 17 through 20, a machine executable program of machine executable instructions is recited, but no exemplary program is disclosed by applicants. Thus, it would be impossible for one of ordinary skill in the art (such as a cooling system test technician, a cooling system designer, or, with regard to claims 17 through 20, a computer programmer) to make and use the invention without undue experimentation.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1 through 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, each of base claims 1 and 17

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recites the broad recitation “automatically checking at least one coolant loop of the coolant system for a leak” and each of these claims also recites “isolating the at least one coolant loop from coolant flow through the cooling system and checking for drop in coolant pressure within the at least one coolant loop” which is the narrower statement of the range/limitation. Similarly, base claim 9 recites the broad recitation “means for automatically checking at least one coolant loop of the coolant system for a leak” and the claim also recites “means for isolating the at least one coolant loop from coolant flow through the cooling system, and for checking for drop in coolant pressure within the at least one coolant loop” which is the narrower statement of the range/limitation.

Due to a lack of an adequate description in the originally filed disclosure, it is not clear which structures or materials or equivalents thereof correspond to the following means-plus-functions limitations in the claims, thus rendering these limitations indefinite with regard to the scope of protection sought thereby: means for retaining isolation of the at least one coolant loop from coolant flow through the cooling system upon detection of a drop in coolant pressure in the at least one coolant loop as recited in claim 9 and all claims depending therefrom; means for waiting a defined interval as recited in claims 11 and all claims depending therefrom; and, means for sending a signal to shutoff power to the associated electronics subsystem when a leaking coolant loop is detected as recited in claim 13.

The preambles of claims 17 through 20 are drawn to a machine or apparatus, yet the limitations in the body of each of the claims are drawn almost exclusively to method steps performed by the machine or apparatus which is the subject of the preambles, thus rendering indefinite the intended scope of protection sought by the claims.

***Allowable Subject Matter***

10. As best can be understood in view of the indefiniteness of the claims, claims 1 through 20 may be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 1<sup>st</sup> and 2nd paragraphs, set forth in this Office action. However, due to the indefiniteness and written description/enableness problems

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associated with the abovementioned claims, no positive patentability determination can be made at this time.

*Conclusion*

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ljiljana (Lil) V. Ciric whose telephone number is 571-272-4909. The examiner can normally be reached on Mondays through Fridays from 10:00 a.m. to 6:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eric Keasel, can be reached at 571-272-4929.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Primary Examiner  
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